## REMARKS

This amendment is presented in response to the office action mailed
.December 6, 2005. Claims 66-76 were added and Claim 65 canceled. Claims
38-39, 42 were previously canceled. Various claims were amended. The
5    application now contains claims 1-37, 40-41, 43-64, 66-76.

## HILTON DAVIS / FESTO STATEMENT

Various claims have been amended. These amendments were not made
for patentability reasons. Rather, these changes were implemented to make
10    various improvements in form, remove unnecessary limitations, to clarify the
statement of invention, and to place the application in condition for possible
appeal. For example, in claim 1, "directional selection means" was changed to
"directional selector" to broaden the claim by omitting means plus function
language. Also in claim 1, the claim was broadened by deleting the "one or more
15    buttons..." limitation. Numerous further changes were made to broaden
inadvertently narrow claim limitations.

## 35 USC 103 REJECTION: CLAIMS 1, 12-15, 17, 27, 31-35, 37, 58, 60, 63-64

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These claims were rejected under 35 USC 103 as being unpatentable
over the proposed combination of U.S. Patents: 6,567,072 B2 to Watanabe,
6,654,733 B1 to Goodman et al. ("Goodman"), and 6,002,390 to Masui et al.
("Masui"). This rejection is hereby traversed. The claims are patentable since
25    there a *prima facie* case of obviousness does not exist, as discussed in greater
detail below.[1]

### Teaching/Suggestion of Claim Limitations

30    First, the *prima facie* obviousness case is incomplete because, even if the
references were to be combined as suggested (albeit improperly, as discussed

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[1]    MPEP 2142.

below), the combination still does not teach or suggest all the claim limitations.[2]
To support the conclusion that the claimed invention is directed to obvious
subject matter, either the references must expressly or impliedly suggest the
claimed invention or the examiner must present a convincing line of reasoning as

5    to why the artisan would have found the claimed invention to have been obvious
in light of the teachings of the references.[3]

All words in a claim must be considered in judging the patentability of that
claim against the prior art.[4] Taking claim 1 (as amended) as an example, the
proposed combination of references fails to teach the following combination:

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"A text entry input system, comprising:
a direction selector to individually point in a direction of letters to
collectively form an intended linguistic object, where each letter comprises a
linguistic object subcomponent;

15             a collection of linguistic objects;
an output device with a text display area;
a processor, comprising:
a difference calculation module configured to output, for each act of
pointing, a letter and associated weight value based upon factors including
20         at least an angular difference between an actual direction of pointed and
pre-assigned directions of said letters;
an object search engine configured to construct a predicted list of
linguistic objects based on the output letters and weight values;
a selection component to facilitate user selection of a desired
25         linguistic object from the predicted list of linguistic objects."

Considering claim 1 in greater detail, the applied art fails to disclose a
"direction selector to individually point in a direction of letters to collectively form
an intended linguistic object, where each letter comprises a linguistic object

30    subcomponent" and the claimed "collection of linguistic objects." The office
action suggests that the directional selector is found in Watanabe's "direction
indicating device 2." [Office Action: page 2] Watanabe's direction indicating

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[2]    MPEP 2142, 2143.03.

[3]    *Ex Parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). MPEP 706.02(j).

[4]    *In re Wilson*, 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970). MPEP 2143.03.

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device is purportedly used for input of characters of Hiragana, Katakana, alphanumerics, etc. [Watanabe: col. 7, lines 20-25; col. 8, lines 5-13; Fig. 1] The office action suggests that the collection of linguistic objects is found in Watanabe's character sets 11-17. [Office Action: page 2] Watanabe's character

5    sets purportedly show "characters." [Watanabe: col. 8, lines 5-24; Figs. 3-4]

The argument that Watanabe shows both directional selector and collection of linguistic objects (as claimed) does not make sense. Since Watanabe's direction indicating device points to "characters," the office action is apparently suggesting that Watanabe's "characters" are tantamount to the

10   claimed "linguistic object subcomponents." If so, then Watanabe's character sets do not show a "collection of linguistic objects" as claimed, since they merely show "characters." In this case, there is no showing of a "collection of linguistic objects."

On the other hand, if the office action's argument is that Watanabe's

15   character sets teach a collection of linguistic objects, then this is an argument that Watanabe's characters are "linguistic objects." If characters are linguistic objects as argued, then Watanabe's direction indicating device points to the linguistic objects, not their "subcomponents" as claimed. In this case, Watanabe fails to teach "a direction selector to individually point in a direction of letters to

20   collectively form an intended linguistic object, where each letter comprises a linguistic object subcomponent" as claimed.

The applied art further lacks "a difference calculation module configured to output, for each act of pointing, a letter and associated weight value based upon factors including at least an angular difference between an actual direction of

25   pointing and pre-assigned directions of said letters." The office action proposes that Watanabe teaches a "distance value calculation module" because its processor calculates a distance to find letters in the pointing direction, according to Watanabe's col. 8, lines 24-35 and FIGS. 5A-5C. [Office Action: page 3] A closer look at Watanabe, however, reveals a rather different teaching than what

30   is claimed. Namely, the cited passage concerns Watanabe's technique for the user to select a character set, such as Hiragana, Katakana, alphanumeric,

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symbol, etc. [Watanabe: FIG. 5A] The character set is selected by (1) degree
that the stick is lowered, or (2) load applied to the stick. [Watanabe: col. 8, lines
30-35; FIGS. 5B-5C] A further example is discussed at Watanabe's col. 9, lines
18-48, and FIG. 8a. Watanabe is therefore silent as to any weight values.

5       Moreover, Watanabe fails to address any angular difference, as required. Thus,
the cited teaching does not show the claimed "difference calculation module
configured to output, for each act of pointing, a letter and associated weight value
based upon factors including at least an angular difference between an actual
direction of pointing the directional selector and pre-assigned directions of said

10      letters."
        Nor is such feature shown by other passages of Watanabe. In particular,
Watanabe's user selects the exact character desired through intricate
manipulation of the circumferential position and radial position/load of a joystick
along with key entry. [Watanabe: col. 9, lines 29-35, 41-47] Hence, the

15      operation of Watanabe is simply unrelated to the operation of outputting (for each
act of pointing) a letter and associated weight value based upon factors including
at least an angular difference between an actual direction of pointing and pre-
assigned directions of said letters. With Watanabe, the characters included in a
certain character set are selected by rotating the stick 3 in a circumferential

20      direction. [Watanabe: col. 9, lines 1-8] Therefore, Watanabe does not care if
there is any angular difference between an actual direction indicated by its "stick"
and one of the characters; Watanabe's user simply chooses the character
according to circumferential direction. Furthermore, since Watanabe uses tilt
plus circumferential movement to indicate a character (rather than "direction" as

25      claimed), the claim limitation "direction of each of the letters" simply does not
make sense in Watanabe. Consequently, Watanabe does not teach the claimed
"difference calculation module."
        Nor is the claimed "difference calculation module" feature found in
Goodman. Goodman is aimed at soft keyboard technology [Goodman: FIG. 2;

30      col. 1, lines 45-57] Accordingly, Goodman does not teach a directional selector,
and necessarily lacks any concern with "angular difference between an actual

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direction of pointing and pre-assigned directions of said letters." Quite clearly, then, Goodman does not teach the "difference calculation module" as claimed.

The office action proposed that Goodman teaches a "distance value calculation module" at Fig. 3, item 204, and Col. 9, lines 21-62. A careful review

5    of these passages helps clarify that Goodman does not, in fact, teach the claimed feature. Rather, item 204 of Fig. 3 simply shows a text entry box of a user device 400. [Goodman: col. 6, lines 13-28] The cited passage of column 9 addresses a detailed calculation by which an intended-to-have-been-typed key sequence is hypothesized. [Goodman: col. 8, lines 5-10] However, there is no

10   consideration of indications of a directional selector, nor angular difference, pre-assigned directions of letters, and the like. Goodman fails to teach the claimed "difference calculation module configured to output, for each act of pointing, a letter and associated weight value based upon factors including at least an angular difference between an actual direction of pointing and pre-assigned

15   directions of said letters."

The applied art also lacks "an object search engine configured to retrieve a predicted list of linguistic objects based on the output letters and weight values" as claimed. The office action cited Watanabe as providing this feature. [Office Action: page 2] However, Watanabe has no need to predict any list of linguistic

20   objects because Watanabe's user selects the exact character desired through intricate manipulation of the circumferential position and radial position/load of a joystick along with key entry. [Watanabe: col. 9, lines 29-35, 41-47.] Therefore, Watanabe does not show a predicted list of linguistic objects, as claimed. In Watanabe, circumferential and radial joystick positions correspond to row and

25   column of a currently selected symbol table, e.g., Hiragana, Alphanumeric, Katakana, etc. [Watanabe: FIGS. 5a-5c] A further example is discussed at Watanabe's col. 9, lines 18-48, and FIG. 8a. The claimed "object search engine" avoids the unduly intricate approach of Watanabe by avoiding the necessity of achieving precise joystick tilt in order to enter characters.

30   In the previous office action it was suggested that the "object search engine" is taught by Watanabe's col. 9, line 1-17 and FIG. 7. [Office Action of 5-

4-2005: pages 2-3] However, a careful reading of Watanabe reveals otherwise, and additionally underscores Watanabe's failure to teach the claimed feature. In particular, the cited passage discusses certain details of the mapping between cursor manipulation and character selection. For example, Watanabe is said to

5    use five concentric circles each divided into 12 sectors of 30 degrees each, and at the intersection of the radially extended sector lines and each concentric circle, when the Hiragana character set is selected, the rows "a through wa" are mapped clockwise, and in the case of the row "a", "a through u" are mapped at the intersection of a radially extending line and each concentric circle.

10   [Watanabe: col. 9, lines 9-17] Lacking from the cited passage is any disclosure of the claimed combination including "an object search engine configured to construct a predicted list of linguistic objects based on the output letters and weight values."

In view of the foregoing, independent claim 1 is patentably distinguished

15   from the cited combination of Watanabe, Goodman, and Masui as applied by the Office Action. For similar reasons, independent claim 32 (as amended) is also patentably distinguished from the cited art. Independent 63-64 are similarly patentable over the cited art, for similar reasons which, for the sake of completeness, are discussed in further detail as follows.

20   In the case of claim 63, the applied art does not disclose the claimed combination including a text input entry module "where a predetermined relationship exists between said linguistic object subcomponents and different assigned angular directions of the direction indicator." The office action cites to Watanabe to supply this feature. [Office Action: page 8] With Watanabe,

25   however, characters do not have different assigned angular directions. Rather, Watanabe's user first selects a character set, such as Hiragana, Katakana, alphanumeric, symbol, etc. [Watanabe: FIG. 5A] The character set is selected by (1) degree that the stick is lowered, or (2) load applied to the stick. [Watanabe: col. 8, lines 30-35; FIGS. 5B-5C] Characters of a certain character

30   set are selected by rotating the stick 3 in a circumferential direction. [Watanabe:

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col. 9, lines 1-35] Thus, Watanabe lacks the predetermined relationship between linguistic object subcomponents and angular directions, as claimed.

As to Claim 63, the cited art further lacks "a calculation module to apply the predetermined relationship to each user-submitted direction entered via the

5    direction indicator to provide an output, said output including: (1) multiple predicted linguistic object subcomponents including a group of linguistic object subcomponents whose assigned angular directions are nearest the user-submitted directions, and (2) for each predicted linguistic object subcomponent, an associated proximity weighting proportional to an angular difference between

10    the user-submitted direction and the angular direction assigned to the predicted linguistic object subcomponent." The office action cites to Goodman in relation to this feature. [Office Action: page 9] In contrast, though, Goodman is aimed at soft keyboard technology [Goodman: FIG. 2; col. 1, lines 45-57] Accordingly, Goodman does not teach a directional selector, and necessarily lacks any

15    concern with angular direction, as claimed. The office action suggests that Goodman might teach a "distance value calculation module" at Fig. 3, item 204, and Col. 9, lines 21-62. [Office Action: page 9] As discussed above, however, Goodman's own language demonstrates an absence of the claimed feature. Rather, item 204 of Fig. 3 simply shows a text entry box of a user device 400.

20    [Goodman: col. 6, lines 13-28] The cited passage of column 9 addresses a detailed calculation by which an intended-to-have-been-typed key sequence is hypothesized. [Goodman: col. 8, lines 5-10] However, there is no consideration of user-submitted direction, angular directions of linguistic object subcomponents, angular difference, etc. Consequently, Goodman fails to teach

25    a "calculation module..." as claimed.

The applied art also lacks "an object search engine configured to utilize the output to retrieve from the database a list of predicted linguistic objects potentially representative of the user-submitted directions." The office action cited Watanabe in relation to this feature. [Office Action: page 8] However,

30    Watanabe has no need to predict any list of linguistic objects because Watanabe's user selects the exact character desired through intricate

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manipulation of the circumferential position and radial position/load of a joystick along with key entry. [Watanabe: col. 9, lines 29-35, 41-47.] Therefore, Watanabe does not show a predicted list of linguistic objects, as claimed.

5   The cited art further lacks "an object search engine configured to utilize the output to retrieve from the database a list of predicted linguistic objects potentially representative of the user-submitted directions." In contrast to this, as mentioned above, Watanabe's user selects the exact desired character using a combination of tilt and circumferential motion of a stick. The notion of "linguistic objects potentially representative of user-submitted directions" is missing from

10  Watanabe.

The Office Action suggests that Watanabe might provide the claimed "object search engine" feature at col. 9, lines 1-17. [Office Action: page 8] Still, Watanabe's own words reveals otherwise, and further serve to underscore Watanabe's failure to teach the claimed feature. In particular, the cited passage

15  merely discusses certain details of Watanabe's mapping between cursor manipulation and character selection. For example, Watanabe is said to use five concentric circles each divided into 12 sectors of 30 degrees each, and at the intersection of the radially extended sector lines and each concentric circle, when the Hiragana character set is selected, the rows "a through wa" are mapped

20  clockwise, and in the case of the row "a", "a through u" are mapped at the intersection of a radially extending line and each concentric circle. [Watanabe: col. 9, lines 9-17] Lacking from the cited passage is any disclosure of the claimed combination including "an object search engine configured to utilize the output to retrieve from the database a list of predicted linguistic objects

25  potentially representative of the user-submitted directions."

In view of the foregoing, independent Claim 63 is patentably distinguished from the cited art as applied by the Office Action. Independent claim 64 is patentable on similar grounds.

As to the dependent claims (1, 12-15, 17, 27, 31, 33-35, 37, 58, 60)

30  addressed in the rejection based upon Watanabe-Goodman-Masui, these claims are distinguished over the applied art (even without considering any of their

individual merits) because they depend from already-distinguished independent claims 1 or 32.[5]

## Suggestion or Motivation

5    In addition to the reasons given above, the *prima facie* obviousness case is also defective because there has been no suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.[6]

10    The office action proposed that it would have been obvious to incorporate Goodman into Watanabe in order to determine a most likely intended-to-be-typed keystroke. [Office Action: page 3] This is nearly a direct recitation of Goodman's stated benefit. And, although this may help to indicate the desirability of using Goodman's system alone, there is nothing to show why it would be desirable,

15    feasible, or even useful to have such a feature in <u>Watanabe</u>. Just because one reference might tout the benefit of diesel engines, this mere fact does not indicate that it would be beneficial to incorporate such teachings into second reference describing a mechanical pencil. This would be ridiculous. In the same way, proposing to incorporate the benefit of Goodman's teachings (i.e., to

20    determine a most likely intended-to-be-typed keystroke) into Watanabe is simply untenable because Watanabe already uses tilt and circumferential direction of a stick in lieu of keystrokes. [Watanabe: FIG. 5A; col. 8, lines 30-35; FIGS. 5B-5C; col. 9, lines 18-48, 29-35, 41-47; FIG. 8a]

Accordingly, the *prima facie* obviousness case is defective because there

25    has been no legally sufficient suggestion or motivation to combine reference teachings.

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[5]    *Cf.* If an independent claim is nonobvious under 35 USC 103, then any claim depending therefrom is nonobvious. *In re Fine,* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). MPEP 2143.03.

[6]    MPEP 2142.

Rather, than any legally meritorious case for combining Watanabe and Goodman, the proposed modification of Watanabe to provide the features of the present invention is simply a result of hindsight reconstruction. However, it is improper to attempt to establish obviousness by using the applicant's

5 specification as a guide to combining different prior art references to achieve the results of the claimed invention.[7] The teaching or suggestion to make the claimed combination must be found in the prior art, and not based on applicant's disclosure.[8] The critical inquiry is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the

10 combination.[9] Obviousness is tested by "what the combined teachings of the references would have suggested to those of ordinary skill in the art."[10] But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination."[11] And "teachings of references can be combined only if there is

15 some suggestion of incentive to do so."[12]

"To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein

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[7]    *Orthopedic Equipment Co., Inc. v. United States*, 702 F.2d 1005, 1012, 217 USPQ 193, 199 (Fed. Cir. 1983):

[8]    *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

[9]    *In re Fritch*, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992) ("It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious."); *Fromson v. Advance Offset Plate, Inc.*, 755 F.2d 1549, 1556, 225 USPQ 26, 31 (Fed. Cir. 1985) (nothing of record plainly indicated that it would have been obvious to combine previously separate lithography steps into one process). See e.g., *In re Gordon et al.*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (mere fact that prior art could be modified by turning apparatus upside down does not make modification obvious unless prior art suggests desirability of modification); *Ex Parte Kaiser*, 194 USPQ 47, 48 (Pat. Bd. of App. 1975) (Examiner's failure to indicate anywhere in the record his reason for finding alteration of reference to be obvious militates against rejection).

[10]   *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

[11]   *ACS Hosp. Sys. Inc. v. Montefiore Hosp.*, 32 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

[12]   *Id.*

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that which only the inventor taught is used against its teacher."[13]  It is essential that "the decisionmaker forget what he or she has been taught at trial about the claimed invention and cast the mind back to the time the invention was made. . . to occupy the mind of one skilled in the art who is presented only with the

5 references, and who is normally guided by the then-accepted wisdom in the art."[14]

The policy of the Patent and Trademark Office[15] is to follow in each and every case the standard of patentability enunciated by the Supreme Court in *Graham v. John Deere Co.*[16] As stated by the Supreme Court:

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> Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the
15 > subject matter is determined.  Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.[17]

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Thus, hindsight reconstruction, using the applicant's specification itself as a guide, is improper because it fails to consider the subject matter of the invention "as a whole" and fails to consider the invention as of the date at which the invention was made.

25      Accordingly, the *prima facie* obviousness case is defective because there has been no legally sufficient suggestion or motivation to combine reference

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[13]     *W. L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

[14]     *Id.*

[15]     MPEP 2141.

[16]     148 USPQ 459 (1966).

[17]     148 USPQ at 467.

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teachings. When evidence is submitted to rebut a prima facie case of obviousness, the decision maker must consider all of the evidence anew.[18]

Reasonable Expectation of Success

5    In addition to the reasons stated above, the *prima facie* obviousness case is further defective because the office action failed to show that there would be a reasonable expectation of success in modifying/combining references.[19] The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.[20] If the examiner does not produce a prima facie

10   case, the applicant is under *no* obligation to submit evidence of nonobviousness.[21] Critically, to establish a *prima facie* case of obviousness, *there must be a reasonable expectation of success.*[22] This reasonable expectation of success must be found in the prior art, not in Applicant's disclosure.[23]

15   The office action lacks any evidence, allegation, or other mention of the legally required "reasonable expectation of success." Since this mandatory topic is unaddressed by the office action, no *prima facie* case of obviousness has been properly established.

Furthermore, for a number of reasons, an ordinarily skilled artisan would

20   not enjoy reasonable prospects of success in combining Goodman with Watanabe.

As one example, Watanabe and Goodman have incompatible goals. Watanabe seeks to provide an environment where the input of Japanese language characters can be simply carried out on a small apparatus which has

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[18]    In re Rinehart, 531 F.2d 1048, 1052 (CCPA 1976).

[19]    MPEP 2142, 2143.02.

[20]    MPEP 2142.

[21]    *Id.*

[22]    MPEP 2143.

[23]    *In re Vaeck*, 947 F.2d 488, 20 USPQ.2d 1438 (Fed. Cir. 1991). MPEP 2143.

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few input means and where character input can be carried out only with one hand in an environment that does not allow the use of both hands, and where it is possible to select characters by the movements of a finger without selecting characters form a character chart displayed on the screen. [Watanabe: col. 3,

5    lines 44-68] Although Goodman's objectives are not expressly stated, Goodman clearly concerns keyboards (e.g., FIG. 3), and seeks to determine the most-likely-to-be-intended keystrokes to accommodate user typing error. [Goodman: Abstract] In any case, Goodman is not particularly suited to one-handed use, and necessarily relies on selecting characters from a chart displayed on the

10   screen (FIG. 3). Along these lines, the Watanabe and Goodman references employ completely different and inconsistent approaches.

Accordingly, these fundamental differences suggest that there is a poor expectation of success to be realized by combining the references. Accordingly, since an ordinarily skilled artisan would not realize reasonable prospects of

15   success in combining Goodman with Watanabe, the *prima facie* case of obviousness is lacking.


Conclusion as to Claims 1, 12-15, 17, 27, 31-35, 37, 58, 60, 63-64

As shown above, then, these claims are patentable since a *prima facie*

20   case of obviousness does not exist. Namely, (1) the applied art fails to teach the features of the claims, (2) there is insufficient motivation to combine/modify references as proposed by the office action, and (3) there is no showing that an ordinarily skilled artisan would have a reasonable expectation of success in making the office action's proposed modification of references.

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35 USC 103 REJECTIONS:
CLAIMS 2-11, 13, 16, 18-26, 28-30, 36, 38, 40-41, 43-57, 59, 61-62

General Discussion

30   These claims were rejected under 35 USC 103 as being unpatentable over the Watanabe-Goodman-Masui combination as supplemented by various further references. Even without considering the individual merits of these

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dependent claims, they are already patentably distinguished over the proposed combinations or modification involving Watanabe-Goodman-Masui. Namely, these claims depend from independent claims that are already allowable over Watanabe-Goodman-Masui (as discussed above), and the added references still

5    do not supply the features missing from Watanabe-Goodman-Masui.[24]

Nonetheless, to provide some examples, several dependent claims are discussed to illustrate patentability on their own merits.

In the example of claim 10, the cited art does not teach an "on-screen keyboard representation of a ring of letters..." where "each of said letters

10    occupies different amount of radians depending upon use frequency." The office action admits that the combination of Watanabe, Goodman, Masui, and Vayda fails to teach this feature. [Office Action: page 18] Hence, the office action points to Comerford to supply the claimed subject matter. [Office Action: page 18] However, Comerford is limited to a standard keyboard format (see FIGS. 2-

15    3) or a variation such as where the letters are rearranged or different letters used. [Comerford: Abstract] Therefore, Comerford is unrelated to a radially disposed keyboard, and furthermore has nothing to do with an on-screen keyboard where "each of said letters occupies different amount of radians depending upon use frequency" as claimed. Accordingly, claim 10 is patentably

20    distinguished on its own merits.

In the example of claim 43, the applied art does not teach "wherein said directional input device is associated with an on-screen keyboard." The office action proposed that Vayda teaches "directional input means [user input device 106] that is associated with an on-screen keyboard." [Office Action: page 15]

25    However, Vayda's cited user input device 106, does not constitute a directional input means. Rather, Vayda depicts a keyboard 106 (FIG. 20), which directly enters letters and such, completely unrelated to the indicating of any direction. Furthermore, although one embodiment of Vayda purportedly uses a mouse (col.

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[24]    If an independent claim is nonobvious under 35 USC 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). MPEP 2143.03.

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17, line 31), the well known use of such is for user indication of <u>position</u> (i.e., a screen position as corresponding to cursor position), and is unrelated to <u>direction</u>. Accordingly, the cited art does not teach the claimed feature "wherein said directional input device is associated with an on-screen keyboard," and

5   claim 43 is patentably distinguished on its own merits.

Furthermore, as to claim 43, the suggestion or motivation to combine Vayda with Watanabe is missing. Namely, the office action indicates that Vayda teaches an on-screen keyboard. [Office Action: page 15] However, Watanabe teaches away from the proposed combination with Vayda because Watanabe

10  indicates a specific objective to avoid selecting from a character chart displayed on the screen. [Watanabe: col. 3, lines 65-68] A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.[25] Furthermore, it is improper to combine references where the references teach away from their combination.[26] Accordingly, there is

15  no legally sufficient suggestion or motivation to combine Vayda with Watanabe-Goodman-Masui, and the *prima facie* obviousness case is incomplete as to claim 43.

### Particular Discussion as to Vargas

20  In more particular consideration of claims 19-23, 40-41, 46-53, the added reference (U.S. 5,748,512 to Vargas) still does not provide features missing from Watanabe-Goodman-Masui. Taking claims 19-23 as an example, Vargas still does not disclose features such as the "difference calculation module" and the "object search engine" and the "selection component" and other such features.

25  Instead, Vargas was introduced in an attempt to supply specific linguistic features, and more particularly, details concerning a linguistic model. [Office

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[25]   *W.L. Gore & Associates, Inc.* v. *Garlock, Inc.,* 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied,* 469 U.S. 851 (1984). MPEP 2141.02

[26]   *In re Graselli,* 713 F.2d 731, 218 USPQ 769, 779 (Fed. Cir. 1983). MPEP 2145(4).

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Action: page 20] Therefore, claims 19-23, 40-41, 46-53 are patentable even without the need to discuss particular features of these claims.

Nonetheless, to provide some examples, several dependent claims are discussed to illustrate their patentability on their own merits.

5        In the example of claim 21, the applied art does not teach an embodiment where the "list of predicted linguistic objects are ordered by a combination value of a calculated weighted difference value and a linguistic model." As discussed above, the proposed combination of Watanabe-Goodman-Masui does not teach the claimed difference calculation module (which is defined in claim 1). The

10    combination therefore lacks the "weighted difference value" as claimed. Vargas still does not teach the "weighted difference value," as Vargas was added specifically to show a methodology whereby a likely correct entry is entered even when the user touches a key off center. [Office Action: page 20] Accordingly, the cited art does not teach the claimed feature, where the "list of predicted

15    linguistic objects are ordered by a combination value of a calculated weighted difference value and a linguistic model." Claim 40 is patentable for similar reasons.

       In the example of claim 52, the cited art does not teach "where the order of each linguistic object in the list is based at least in part upon a mathematical

20    function of probability weightings for all linguistic object subcomponents in the linguistic object" as claimed. The office action admits that Watanabe-Goodman-Masui do not teach this feature, and therefore proposes that Vargas teaches it. [Office Action: page 20] However, Vargas' own words indicate a completely different teaching. Namely, Vargas is aimed at a method for selecting a next

25    character for entry when a key of the keyboard is stuck off center. [Vargas: Abstract] User contact within 0.2 of the key length from center is considered a direct hit and that specific character is entered. For less accurate touch contacts, the method evaluates two adjacent keys along with the key actually contacted to identify the most likely candidate key based upon occurrence frequency,

30    distance, etc. [Vargas: Abstract] However, Vargas does not utilize an "output of candidate linguistic object subcomponents and associated probability

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weightings..." to "construct a list of predicted linguistic objects" as required by the base claim 32, and therefore necessarily fails to teach any particular order of such "linguistic object in the list." Further, Vargas concerns a <u>character</u> selection system, and lacks any teaching of a list of linguistic objects. Far beyond the

5 reach of Vargas' teaching is the claimed feature "wherein the order of each linguistic object in the list is based at least in part upon a mathematical function of probability weightings for all linguistic object subcomponents in the linguistic object."

In addition to the reasons given above, the *prima facie* obviousness case

10 as to claims 19-23, 40-41, 46-53 is also defective because there has been no adequate suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.[27] The office action suggests that it would have been obvious to one of ordinary skill in the art at the time of the

15 invention "to combine the predicted linguistic objects as taught by Vargas with the text input method taught by Watanabe so that a likely correct entry is entered even when the user touches a key off center." [Office Action: page 20] On the contrary, the suggestion or motivation to make the proposed modification is lacking since Watanabe teaches away from such a combination. In particular,

20 Watanabe purportedly shows an approach that involves moving a joystick in circumferential and axial directions to select a character and confirming with another key. For example, the "I" is selected, and at this point the determination key is pressed, and "I" is simply selected. [Watanabe: col. 9, lines 46-48] The selected character is made the input character when there is input to the effect

25 that one among the displayed characters has been selected as an input character from the key input means. [Watanabe: col. 4, lines 10-15] "The selected character is made the input character depending on the circumferential position information when there is input to the effect that one among the displayed characters has been selected as an input character from the key input

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[27]     MPEP 2142.

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means." [Watanabe: col. 18, lines 30-35] *See also*, col. 7, line 61 - col. 8, line 5.
This approach guarantees accuracy, because the user would not touch the
determination or other such confirmation key unless the joystick positioning was
accurate.

5          Furthermore, Watanabe already provides a character editing operation
which would be satisfactory to rectify a situation where the user touches a key off
center, without requiring any teachings from Vargas. [Watanabe: Fig. 18]
Therefore, the only reason to combine Watanabe and Vargas is hindsight
reconstruction, in an improper attempt to arrive at the claimed structure. A prior

10    art reference must be considered in its entirety, i.e., as a whole, including
portions that would lead away from the claimed invention.[28] Furthermore, it is
improper to combine references where the references teach away from their
combination.[29] Accordingly, the claims are patentable because the required
suggestion or motivation to combine references is lacking.

15          In addition to the reasons stated above, the *prima facie* obviousness case
as to claims 19-23, 40-41, 46-53 is further defective because the office action did
not show that there would be a reasonable expectation of success in
modifying/combining references.[30] The office action lacks any evidence,
allegation, or other mention of the legally required "reasonable expectation of

20    success" in combining the teachings of Watanabe and Vargas. Since this
mandatory topic is unaddressed by the office action, there has been no *prima
facie* showing of obviousness.

          Moreover, , since Watanabe and Vargas utilize completely inconsistent
approaches, an ordinarily skilled artisan would <u>not</u> enjoy reasonable prospects of

25    success in combining the Watanabe and Vargas. As mentioned previously,
Watanabe utilizes a primarily joystick character entry procedure requiring

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[28]    *W.L. Gore & Associates, Inc.* v. *Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983),
*cert. denied*, 469 U.S. 851 (1984). MPEP 2141.02

[29]    *In re Graselli*, 713 F.2d 731, 218 USPQ 769, 779 (Fed. Cir. 1983). MPEP 2145(4).

[30]    MPEP 2142, 2143.02.

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confirmation by a user, whereas Vargas utilizes simple keyboard entry. Accordingly, this fundamental difference suggests that there is a poor expectation of success to be realized by combining the references.

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## NEW CLAIMS

New claims 66-76 have been added to the application. These claims are patentable over the applied art for reasons including some similar to the discussion above. No new matter has been added, since the new claims enjoy ample support throughout the originally-filed specification, e.g. page 5, line 15 to

10    page 18, line 10, and Figures 1-3, 4b, 5.

## CONCLUSION

In view of the foregoing, all pending claims in the application are patentable over the applied art. Favorable reconsideration and allowance of the

15    application are hereby requested.

The Commissioner is authorized to charge the fee of $300.00 for the extra claims and any other required fees (or credit any overpayment) to Deposit Account No. 07-1445.

20

Respectfully Submitted,

Michael A. Glenn

25    Reg. No. 30,176

Customer No. 22,862

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